

U. S. GEOLOGICAL SURVEY
ANNUAL PEAK FLOW FREQUENCY ANALYSIS
Following Bulletin 17-B Guidelines
Program peakfq
(Version 4.0, December, 2000)

Station - 05364000 YELLOW RIVER AT CADOTT, WI
2002 MAR 13 09:02:52

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	57
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	57
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.313
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	2300.0
User supplied high outlier threshold	=	--
User supplied low outlier criterion	=	--
Plotting position parameter	=	0.00

***** NOTICE -- Preliminary machine computations. *****
***** User responsible for assessment and interpretation. *****

WCF133I-SYSTEMATIC PEAKS BELOW GAGE BASE WERE NOTED.	6	2300.0
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.		19047.4
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.		1342.6

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE	LOGARITHMIC		
	EXCEEDANCE DISCHARGE	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	2300.0	0.8947	3.6718	0.2205
BULL.17B ESTIMATE	2300.0	0.8947	3.6718	0.2205

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY'	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
			ESTIMATE	LOWER	UPPER
0.8000	3047.0	3040.0	3028.0	2643.0	3438.0
0.5000	4591.0	4498.0	4591.0	4102.0	5132.0
0.2000	7144.0	7076.0	7198.0	6336.0	8224.0
0.1000	9121.0	9199.0	9263.0	7948.0	10820.0
0.0400	11960.0	12420.0	12310.0	10160.0	14740.0
0.0200	14320.0	15240.0	14930.0	11930.0	18160.0
0.0100	16910.0	18460.0	17890.0	13830.0	22030.0
0.0050	19750.0	22140.0	21250.0	15860.0	26410.0
0.0020	23940.0	27830.0	26400.0	18790.0	33070.0
0.6667	3709.4	(1.50-year flood)			
0.4292	5020.0	(2.33-year flood)			

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2002 MAR 13 09:02:52

I N P U T D A T A L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1943	15600.0		1972	3000.0	
1944	3560.0		1973	10000.0	
1945	4110.0		1974	5700.0	
1946	6670.0		1975	6400.0	
1947	3460.0		1976	4300.0	
1948	1410.0		1977	2000.0	
1949	2320.0		1978	3000.0	
1950	4050.0		1979	3100.0	
1951	6170.0		1980	6600.0	
1952	3600.0		1981	4600.0	
1953	4200.0		1982	6000.0	
1954	9050.0		1983	6800.0	
1955	6170.0		1984	2880.0	
1956	4350.0		1985	2620.0	
1957	651.0		1986	16600.0	
1958	10000.0		1988	2000.0	
1959	4240.0		1989	3200.0	
1960	3300.0		1990	11400.0	
1961	4240.0		1991	5600.0	
1962	3000.0		1992	4150.0	
1963	4400.0		1993	6900.0	
1964	2100.0		1994	7750.0	
1965	11000.0		1995	2500.0	
1966	4100.0		1996	4400.0	
1967	12000.0		1997	4900.0	
1968	4700.0		1998	5300.0	
1969	5900.0		1999	2300.0	L
1970	2500.0		2000	7000.0	
1971	3900.0				

Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1986	16600.0	0.0172	0.0172
1943	15600.0	0.0345	0.0345
1967	12000.0	0.0517	0.0517
1990	11400.0	0.0690	0.0690
1965	11000.0	0.0862	0.0862
1958	10000.0	0.1034	0.1034
1973	10000.0	0.1207	0.1207
1954	9050.0	0.1379	0.1379
1994	7750.0	0.1552	0.1552
2000	7000.0	0.1724	0.1724
1993	6900.0	0.1897	0.1897
1983	6800.0	0.2069	0.2069
1946	6670.0	0.2241	0.2241
1980	6600.0	0.2414	0.2414
1975	6400.0	0.2586	0.2586
1951	6170.0	0.2759	0.2759
1955	6170.0	0.2931	0.2931
1982	6000.0	0.3103	0.3103
1969	5900.0	0.3276	0.3276
1974	5700.0	0.3448	0.3448
1991	5600.0	0.3621	0.3621
1998	5300.0	0.3793	0.3793
1997	4900.0	0.3966	0.3966
1968	4700.0	0.4138	0.4138
1981	4600.0	0.4310	0.4310
1963	4400.0	0.4483	0.4483
1996	4400.0	0.4655	0.4655
1956	4350.0	0.4828	0.4828
1976	4300.0	0.5000	0.5000
1959	4240.0	0.5172	0.5172
1961	4240.0	0.5345	0.5345
1953	4200.0	0.5517	0.5517
1992	4150.0	0.5690	0.5690
1945	4110.0	0.5862	0.5862
1966	4100.0	0.6034	0.6034
1950	4050.0	0.6207	0.6207
1971	3900.0	0.6379	0.6379
1952	3600.0	0.6552	0.6552
1944	3560.0	0.6724	0.6724
1947	3460.0	0.6897	0.6897
1960	3300.0	0.7069	0.7069
1989	3200.0	0.7241	0.7241
1979	3100.0	0.7414	0.7414
1962	3000.0	0.7586	0.7586
1972	3000.0	0.7759	0.7759
1978	3000.0	0.7931	0.7931
1984	2880.0	0.8103	0.8103
1985	2620.0	0.8276	0.8276

1970	2500.0	0.8448	0.8448
1995	2500.0	0.8621	0.8621
1949	2320.0	0.8793	0.8793
1999	2300.0	--	--
1964	2100.0	--	--
1977	2000.0	--	--
1988	2000.0	--	--
1948	1410.0	--	--
1957	651.0	--	--

ANNUAL PEAK DISCHARGE
CUBIC FEET PER SECOND

